

Amendment Under 37 C.F.R. §1.111
U.S. Patent Appln. No. 09/348,425

Docket No. 6169-125
IBM Docket No. BOC9-1999-0036

specified by the command grammar. Support for these amendments can be found at page 16, lines 3-9.

Before addressing the rejections on the art, a brief review of the Applicants' invention is appropriate. The present invention can process voice commands which include a voice command component and a dictation component wherein both components are identified from within a contiguous utterance. In other words, the dictation component is embedded within the voice command. Importantly, while the voice command component is specified by a command grammar, the dictation component is freely dictated text which is embedded within the voice command structure. As the dictation component is not defined by the command grammar, the dictation component does not include predefined command words nor does the dictation component conform to a predefined word ordering.

For example, the present invention can process a contiguous utterance such as "compose electronic mail asking what time is the meeting tonight". Within this voice command, the text "compose electronic mail asking" can be specified within a command grammar. This portion of the contiguous utterance can be recognized as the voice command component. The dictated text "what time is the meeting tonight", which is not defined within the command grammar, can be identified as the dictation component. Once recognized, the execution of the voice command component can cause an electronic mail program to generate an electronic mail message and insert the free-form dictation component "what time is the meeting tonight" into the body of the electronic mail message. Thus, the voice command can be executed such that the dictation component serves as an execution parameter of the voice command.

Turning now to the rejections on the art, claims 22-31 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Gould. In contrast to the present invention which can understand voice commands having command components and freely dictated dictation components embedded within the voice command, Gould teaches a method of discerning whether a user is speaking a voice command or is dictating text. The Gould invention allows a user to dictate text or to speak a voice command without

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having to actively notify the speech recognition system to switch between a command recognition mode and a dictation recognition mode.

The Examiner asserts that Gould teaches "identifying a voice command having a voice command component and dictation component within a contiguous utterance, wherein said voice command component is specified by a command grammar and said dictation component is not specified by said command grammar". In support, the Examiner has cited column 5, line 13 – column 6, line 67 of the Gould specification stating that the limitations of the present invention read onto the text "if CPU determines that user's speech is text . . . if CPU determines that user's speech was a command, then the CPU sends keystrokes or scripting language to the application to cause the application to delete the partial results from the screen and execute the command".

The Applicants respectfully disagree with the Examiner's interpretation of Gould and will address the elements of claims 22 and 27 in serial fashion. The Applicants' claims 22 and 27 read in part "identifying a voice command having a voice command component and a dictation component". The voice command includes both a voice command component and a dictation component. To clarify this aspect of the present invention, the Applicants have amended claims 22 and 27 to include the text "wherein said dictation component is embedded within said voice command".

In contrast to the present invention, Gould recognizes speech as text or as a speech command, but does not recognize a command which includes free-form dictated text. In fact, column 6, lines 20-29 of the Gould specification, the very language upon which the Examiner has relied in rejecting claims 22 and 27, supports the Applicants' interpretation of Gould. The cited passage states:

If the CPU determines that the user's speech is text, and the partial results match the final results, then the CPU is finished. However, if the CPU determines that the user's speech is text but that the partial results do not match the final results, then the CPU sends keystrokes or scripting language to the application to correct the displayed text. Similarly, if the CPU determines that the user's speech was a command, then the CPU sends keystrokes or scripting language to the application to cause the application to delete the partial results from the screen and execute the command.

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Thus, in performing speech recognition, Gould makes a determination as to whether recognized speech is dictated text or a command. This determination leads to mutually exclusive outcomes, namely that the recognized speech is either text or a voice command. Gould, however, does not teach or suggest that a voice command can include both a command component and a dictation component which is embedded within the voice command.

The language of claims 22 and 27 further states that the voice command having a voice command component and a dictation component is "within a contiguous utterance". As defined by the Merriam-Webster Collegiate Online Dictionary, accessible at the URL <<http://www.m-w.com>>, the term "contiguous" means "touching or connected throughout in an unbroken sequence", implying that the voice command having both the command component and the dictation component are identified from within an unbroken sequence of speech.

Gould does not recognize a voice command having a command component and a dictation component within a contiguous utterance. In fact, the way in which Gould is able to distinguish dictated text from voice commands is to identify pauses within a user's speech. At column 2, lines 46-59 of the Gould specification, it is stated that "[t]he system recognizes both continuously spoken commands and continuously dictated text by taking advantage of characteristics common to the natural speech of most users. For instance, users typically pause (e.g., 0.5 sec) before and after speaking a command." Gould goes on to state that "[t]o take advantage of these and other characteristics, the system expects the user to pause before and after speaking a command. . ." (emphasis added) At column 5, lines 13-16 of the Gould specification, it is stated that "Referring to FIG. 7, the command sentences, e.g., 78, 80, 84, and 88, are spoken in accordance with a template and without long, e.g., greater than 0.5 second, pauses between the words of the sentence."

These passages support the Applicants' interpretation that Gould recognizes speech as either dictated text or as voice commands, but cannot recognize a voice command having dictated text embedded therein. Moreover, Gould expects a user to pause when switching from dictating text to dictating a voice command whereas the

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present invention can operate on a voice command identified from within a contiguous utterance which includes a free-form dictation component as an execution parameter.

The language of claims 22 and 27, as amended, further recites that the command component is specified by a command grammar while the dictation component is free-form text which is not specified by the command grammar. Thus, according to the language of the Applicants' amended claims, the voice command includes embedded dictated text which can be freely dictated and is not specified by a command grammar.

As noted, Gould recognizes either commands or dictated text, but not commands having dictated text embedded therein. Of the voice commands that Gould does recognize, the voice commands must be fully specified, and therefore, do not include a dictation component made of freely dictated text. While some of the examples cited by the Examiner, for instance the examples at column 6, lines 30-41, may appear to be freely dictated text, closer scrutiny of the Gould specification reveals that in fact the commands recognized by Gould must be completely specified. In other words, the particular words and the ordering of the words are predefined by a command grammar or a series of linked command grammars.

In support, the Applicants note that column 4, lines 45-51 of the Gould specification discuss the manner in which Gould utilizes vocabularies. Importantly, at column 4, lines 51-55, Gould specifically states that "[c]ommands include single words and phrases and sentences that are defined by templates (i.e., restriction rules). The templates define the words that may be said within the command sentences and the order in which the words are spoken." (emphasis added)

Additionally, a significant portion of column 5, line 13 – column 6, line 67 of the Gould specification, the passage cited by the Examiner, discusses FIG. 7. This passage, as well as FIG. 7 itself, does not teach or suggest that commands can include freely dictated text. Rather, Gould teaches how to use a series of grammars and pointers to define the allowable words and the ordering of those words for voice commands. Simply stated, Gould is unable to recognize freely dictated text which is embedded within a voice command because the entire voice command that is

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recognizable by Gould must be fully specified as a template which indicates both the particular words that are allowed within the voice command as well as the ordering of the words that are allowed within the voice command.

The Examiner also has asserted that Gould teaches the executing step of claims 22 and 27. In support, the Examiner has cited and quoted the same portion of Gould that was previously cited. This portion of Gould, specifically column 5, line 13 – column 6, line 67, does not teach "executing said identified voice command component using at least a part of said dictation component as an execution parameter of said voice command".

Instead, the portion of Gould which the Examiner has quoted teaches that while a user's speech is being recognized, the CPU sends keystrokes or scripting language to the application to cause the application to display the partial results. If the partially recognized results match a final determination of the results, indicating that the speech was in fact text, then the CPU is finished. If the CPU determines that either the speech is text but is incorrect, or that the speech was a command, the CPU can send instructions to delete or retract the partially recognized text from the screen. Thus, Gould recognizes speech as text or as a voice command and can delete erroneously displayed partial results. Gould, however, does not execute a voice command which includes at least a part of a dictation component as an execution parameter of the voice command.

In view of the foregoing remarks, withdrawal of the 35 U.S.C. § 102(e) rejection with respect to claims 22-31 is respectfully requested. The Applicants believe that this application is now in full condition for allowance, which action is respectfully requested.

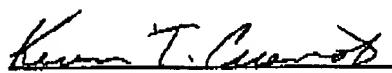
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The Applicants request that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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